

LightTools Training

Amsterdam, Netherlands | 16-20 November 2009



Register today for the upcoming *LightTools*[®] training in Amsterdam. To register or for more information, contact us about these events.

LightTools Training

LightTools is a unique optical engineering and design software product that features virtual prototyping, simulation, and optimization of precision illumination applications. The software has adapted solid modeling technology to accommodate the inherent accuracy required to simulate ray paths of light as they traverse through and within optical elements and mechanical structures. The software is straightforward to use, accurate, has the most advanced capabilities commercially available, and supports the tasks of design and engineering iterations in addition to analysis.

Introduction to Illumination Design Using *LightTools* (3 days, €1200)

Course Overview

This short course is a practical introduction to *LightTools* for engineers and scientists who wish to model and analyze the interaction of light with opto-mechanical systems. It assumes some familiarity with optical concepts and terminology. The course will be taught using *LightTools* 6.3. The course includes lectures, demonstrations, and hands-on computer workshop sessions that teach you how to:

- Create an opto-mechanical system model within *LightTools*, with native geometry or imported from a CAD program
- Use Surface Properties to define the interaction of light with various surfaces
- Use Boolean operations to construct complex structures
- Set up an illumination system, including multiple sources and multiple receivers
- Understand, interpret, and manipulate the intensity and illuminance analyses

Course Content (Monday through Wednesday)

- Illumination Fundamentals
- Basic Operations in *LightTools*
- Creating and Importing Objects
- Modeling Optical Properties of Surfaces
- Sources and Receivers
- Modeling Property Zones and Textures

Advanced Topics in *LightTools*: COM Macro Programming and Optimization (2 days, €800)

Course Overview

This course provides a practical overview of the *LightTools* Optimization Module and COM Macro Programming capabilities. The course includes lectures, demonstrations, and hands-on computer workshop sessions. Familiarity with *LightTools* basic features is assumed.

The *LightTools* Optimization Module is a fully integrated system optimization tool. The course will provide background on the optimization process, and explore the range of available variables and customized performance goals.

The COM Macro Programming capability allows users to automate tasks within *LightTools*. The course will use Excel Visual Basic for Applications (VBA) to control *LightTools*. Basic programming experience is helpful, although proficiency in VBA is not necessary.

Course Outline (Thursday & Friday)

Topics covered in the course will include:

COM Macro Programming

- Accessing *LightTools* via Excel's VBA COM interface
- *LightTools* JumpStart Macro Library
- Direct database access

Optimization

- Defining merit functions, variables and constraints
- Merit function considerations when optimizing illumination systems
- Controlling the optimization
- Use of pickups, aliases, and numeric parameters for efficient optimization

LightTools Course Instructor

Mary Kate Crawford, Ph.D. is a Senior Systems Engineer/Customer Service in Customer Service. Dr. Crawford provides technical support for both *LightTools* and CODE V and has over 10 years optical design experience.

IMPORTANT:

- Attendees are responsible for their own arrangements for accommodation.
- Tuition includes all teaching materials.
- Tuition must be paid in full prior to attendance. Minimum enrollments apply.

Contact Us



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